DETAILED ACTION

1.   Claims 1-2,6-7,9-16,19-21 are allowed in this application.

2.   Examiner acknowledges applicant's supplemental amendment to

claims 1-4,6-16, and new claims 20-38, filed on 10/15/2009.

Drawings

3.   The Drawings filed on 4/21/2004 are <u>acceptable</u> for examination purpose.

<u>**Interview:**</u>

4.   Applicant's Attorney Nicholas T. Peters, Reg.No. 53,456 is thanked for the

telephone interview on 06 January 2010. During that telephone interview

Nicholas T. Peters granted authorization to **amend claims: 1,7,9,12,13,15,16,19**;

cancel claims **3-4,8,18,22-35,36-38.**

EXAMINER'S AMENDMENT

5.   An examiner's amendment to the record appears below. Should the

changes and/or additions be unacceptable to applicant, an amendment may be

filed as provided by 37 CFR 1.312. To ensure consideration of such an

amendment, it MUST be submitted no later than the payment of the issue fee.

Pursuant to MPEP 606.01 the <u>Title</u> is changed to read

--METHOD AND SYSTEM FOR QUERYING PLURALITY OF TARGET

DATABASES, DETERMINING WHETHER A POSSIBLE MATCHING OR

IDENTIFYING A NEAR-MATCHING RECORDS —

The application has been amended as follows:

<u>IN THE CLAIMS</u>

1. (Previously Presented)   A method <u>for using a computing system</u> for querying

at least one of a plurality of target databases for one or more target database

records that match an input data query, said method comprising:

<u>receiving at the computer system from a requesting source an input data</u>

<u>query having input data and an input data type</u>;

querying <u>from the computer system </u>a reference database selected from

among a plurality of reference databases based on [[an]] <u>the</u> input data type for a

reference database record that matches the input data[[,]]<u>;</u>

in response to finding a matching reference database record, querying

<u>from the computer system</u> at least one of [[the]] <u>a</u> plurality of target databases for

[[the]] one or more target database records that correspond to the reference

database record[[, and]]<u>;</u>

in response to failing to find a matching reference database record but finding one or more possibly matching reference database records, determining whether a possibly matching record can be considered a near-matching record to the input data;

in response to identifying a near-matching record, querying at least one of the plurality of target databases for the one or more target database records that correspond to the near-matching record;

in response to failing to identify a near-matching record, generating a selection request to choose from among the one or more possibly matching records a record that corresponds to the input data and in response to selection of a chosen record from among the one or more possibly matching records, querying at least one of the plurality of target databases for the one or more target database record that corresponds to the chosen record; and retrieving those target database records that correspond to the reference database record and transferring from the computer system the corresponding records to the requesting source.

2. (Previously Presented) The method of claim 1 further comprising generating a request to enter a new input data query in response to failing to find a reference database record.

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Previously Presented)   The method of claim 1 wherein the querying any of the plurality of target databases further comprises, in response to finding a matching reference database record, querying for records that possibly correspond to the reference database record.

7.   (Currently Amended)   A method for querying one or more target

databases <u>from a computing system </u>for one or more target database records,

said method comprising:

receiving <u>at the computer system </u>an input data query <u>from a requesting</u>

<u>source, wherein the input data query has input data and an input data type</u> [[,]];

based on [[an]] <u>the</u> input data type, selecting from among a plurality of

reference databases one or more reference databases[[,]];

in response to selection of a single reference database[[:]], querying <u>from</u>

<u>the computing system </u>the single reference database for a reference database

record that matches the input data[[,]];

~~using a matching reference database record found by the~~

~~querying for subsequent queries of the one or more target~~

~~databases for the one or more target database records, and~~

<u>in response to selection of multiple reference databases, querying the</u>

<u>multiple reference databases for a reference database record that matches the</u>

<u>input data;</u>

<u>converting a matching reference database record found by the querying</u>

<u>the single reference database or by the querying the multiple reference</u>

<u>databases to a canonical form;</u>

<u>using the canonical form of the matching reference database record for</u>

<u>subsequent queries of one or more target databases for one or more target</u>

<u>database records;</u>

retrieving those target database records that correspond to the matching

reference database records <u>and transferring the corresponding target database</u>

<u>records to the requesting source</u>.

8.   (Cancelled)

9.   (Currently Amended)   The method of claim 7 wherein said ~~using~~

<u>converting</u> comprises converting the matching reference database record to one

or more canonical forms wherein [[each]] <u>an individual of the</u> canonical [[form]]

<u>forms</u> corresponds to one of the one or more target databases and using [[each]]

<u>an individual of the</u> canonical [[form]] <u>forms</u> for querying its corresponding target

database for the one or more target database records.

10.   (Previously Presented)   The method of claim 7 wherein said using

comprises removing information from the matching reference database record

and subsequently using any remaining information for the subsequent queries of

the one or more target databases for the one or more target database records.

11.   (Previously Presented)   The method of claim 7 wherein the matching

reference database record comprises additional information beyond the input

data query and wherein said using comprises:

separating the information of the matching reference database record to

create a plurality of forms, and

using the plurality of forms for the subsequent queries of the one or more

target databases for the one or more target database records.

12.   (Currently Amended)   The method of claim 7 ~~further comprising~~

<u>wherein</u>, in response to selection of multiple reference databases:

~~sequentially querying~~ the multiple reference databases <u>are sequentially</u>

<u>queried</u> until a reference database record that matches the input data is found~~,~~

~~and~~

~~in response to finding a matching reference database record, using the~~

~~matching reference database record for subsequent queries of one or more~~

~~target databases for one or more target database records~~.

13.   (Currently Amended)   The method of claim 7 ~~further comprising~~ wherein, in response to selection of multiple reference databases:

~~querying~~ the multiple reference databases are queried in parallel [[for]] to retrieve [[all]] reference database records that match the input data, and the method further comprises

~~in response to finding one or more matching reference database records:~~

selecting one of the matching reference database records~~,~~

~~and~~

~~using the matching reference database record for~~

~~subsequent queries of one or more target databases for one or~~

~~more target database records~~.

14.   (Previously Presented)   The method of claim 13 wherein said selecting is based on whether there is a quorum among the one or more matching reference database records.

15.   (Currently Amended)   The method of claim 7 ~~further comprising~~ wherein, in response to selection of multiple reference databases:

~~querying~~ the multiple reference databases are queried for [[all]] reference database records that match the input data, and

~~in response to finding one or more matching reference database records,~~

using [[each]] an individual matching reference database record for subsequent

queries of one or more target databases for one or more target database

records.

     16.   (Currently Amended)   A system for querying one or more target

databases for one or more target database records in a computing device, said

system comprising:

     a memory storing:

          a set of reference-based mapping rules <u>configured to match</u>

<s>for matching</s> input data queries to reference database records <u>in</u>

<u>one or more reference databases</u> [[,]]<u>;</u>

          a set of target-based query rules <u>configured to match</u> <s>for</s>

<s>matching</s> reference database records to target database records <u>in</u>

<u>one or more target databases</u>[[,]]<u>;</u>

     a validation and mapping <s>process</s> <u>processor</u> that [[given]] <u>in response to</u>

an input data query, <u>is configured to</u> [[uses]] <u>use</u> the set of reference-based

mapping rules to match at least one record in at least one selected reference

database to the given input data <u>query</u>, and [[uses]] <u>to use</u> the target-based

query rules to match the one or more target database records in the one or more

target databases to the at least one matched reference database record or to a

canonical form of the matched reference database record<u>;</u>

     <s>a reference database list specifying relations between input data types</s>

<s>and reference databases and</s> wherein the validation and mapping <s>process</s>

<u>processor is configured to</u> [[uses]] <u>use a</u> [[the]] reference database list <u>specifying</u>

relations between input data queries and reference databases to determine the

at least one selected reference database[[, and]];

     wherein the validation and mapping processor is configured to use a list of

transformation rules to convert reference database records to canonical forms;

and

     retrieval of wherein the validation and mapping processor is configured to

retrieve a list of identified the one or more target database records.

     17.   (Cancelled)

     18.   (Cancelled)

     19.   (Currently amended)   The system of claim [[18]] 16 wherein the

validation and mapping processor is configured to use the list of transformation

rules are also for converting to convert reference database records to customized

canonical forms that correspond to the target databases.

20.   (Previously presented)   The method of claim 1 wherein said input

data is parsed into component data parts, and said selected reference database

is selected to individually validate the component data parts by

selecting at least one reference database based on the type of component

data part and querying the reference database to select a reference database

record that matches the component data part, and

in response to finding a matching database record, storing the matching

reference database record;

in response to finding matching reference database records for each

component data part, combining each stored matching reference database

records and using the combined records for subsequent queries of one or more

target databases for one or more target database records.

21.   (Previously presented)   The method of claim 7 further comprising:

parsing the input data into component data parts,

sequentially querying the selected reference databases to individually

validate the component data parts by

selecting at least one reference database based on the type

of component data part and querying the reference database to

select a reference database record that matches the component

data part, and

storing a matching reference database record found as a

result of the querying the reference database,

combining stored matching reference database records and using the

combined records for subsequent queries of one or more target databases for

one or more target database records.

22. – 35.   (Cancelled)

36.   (Cancelled

37.   (Cancelled)

38.   (Cancelled)

Reasons for allowance

The following is an examiner's statement of reasons for allowance:

The present invention is directed to querying the reference database will either produce an exact matching record or no matching records. Alternatively, in accordance with a further embodiment it may produce, one or more possible matching records. Assuring possibly matching records are found and no exact matching record is found, a determination is made as to whether one of the possibly matching records is close enough to be considered an exact match to the input data . If none of the possibly matching records is close enough to be considered an exact match, the requesting source is requested to make a new query.

The closest prior art Zamora-McKelvy et al. US Patent No. 6496838 is directed to method and system that facilitates the identification of matching records maintained in separate databases or in a separate tables, particularly matching records maintained in the first database relating to orders with records maintained in a second database relating to the features of the ordered listings, further, the method also includes the steps of identifying a predetermined number of query fields comprised of first data fields and identifying the same number of search fields comprised of second data fields. Each search field identified corresponds with a separate query field. A search of the second records for records that are possible matches for the first record is then performed. For each

corresponding query and search field set, the searching step generates a set of

suggested matching records comprised of the second records wherein the data

within each search field matches the data within each corresponding query field

[see Abstract, col 2, line 18-37].

The closest prior art Kane et al. US Patent No. 6389429 is directed to

generating a target database from one or more source databases, particularly

records of the target database, comparisons are made of various fields of the

respective databases to identify the most closely matching target database

record, Further generating multiple references to records of the target member

database by querying and responsive to the match-closeness parameters

[see Abstract, col 2, line 30-41,fig 2-3]

However, Zamora-McKelvy et al., Kane et al ., either singularly or in

combination, fail to anticipate or render obvious the recited feature *"in response*

to failing to identify a near-matching record, generating a selection request to

choose from among the one or more possibly matching records a record that

corresponds to the input data and in response to selection of a chosen record

from among the one or more possibly matching records, querying at least one of

the plurality of target databases for the one or more target database record that

corresponds to the chosen record", in claim 1;

"converting a matching reference database record found by the querying

the single reference database or by the querying the multiple reference

databases to a canonical form;

using the canonical form of the matching reference database record for

subsequent queries of one or more target databases for one or more target

database records", in claim 7; and

"wherein the validation and mapping processor is configured to use a list

of transformation rules to convert reference database records to canonical forms;

and

wherein the validation and mapping processor is configured to retrieve a

list of the one or more target database records", in claim 16.

These features, together with the other limitations of the independent

claims are novel and non-obvious over the prior art of record. The dependent

claims 2,6,9-15,19-21 being definite, enabled by the specification and further

limiting to the independent claims are also allowable

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is 571-272-4108. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam, Hosain, T, can be reached on (571) 272-3978. The fax phone numbers for the organization where the application or proceeding is assigned is 703/872-9306 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

/Srirama Channavajjala/
Primary Examiner, Art Unit 2166